

**ORDER**

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

1800.58A

8/19/93

SUBJ: NATIONAL AIRSPACE INTEGRATED LOGISTICS SUPPORT POLICY

1. PURPOSE. This order establishes Federal Aviation Administration (FAA) policy and assigns responsibilities for the conduct of National Airspace Integrated Logistics Support (NAILS).
2. DISTRIBUTION. This order is distributed to the branch level at Washington headquarters, regions, centers, and a standard distribution to all Airway Facilities field offices.
3. CANCELLATION. Order 1800.58, National Airspace Integrated Logistics Support Policy, dated July 2, 1987, is canceled.
4. EXPLANATION OF CHANGES. This revision:
  - a. Assigns the responsibility for NAILS to the Associate Administrator for Airway Facilities (AAF-1).
  - b. Assigns NAILS policy, plans, and implementation to the NAS Transition and Implementation Service (ANS).
  - c. Establishes the requirement that all National Airspace System (NAS) acquisition programs; research, engineering and development (R,E&D) programs; and major equipment modification programs be assigned an associate program manager for logistics (APML).
  - d. Delineates the responsibilities and functions of the organizations involved in NAILS.
  - e. Changes the organizational responsibilities for the NAS Transition and Implementation Service to a leadership role in the activation and functioning of NAILS management teams (NAILSMT) and monitoring of system acquisition programs to verify that life-cycle support is adequately addressed.
  - f. Identifies other changes in organizational responsibilities resulting from the FAA realignment in March 1990.

5. DEFINITIONS. Definitions necessary to understand and implement the provisions of this order are:

a. Associate Program Manager for Logistics (APML). The APML is a logistics management specialist responsible for NAILS for an acquisition. The APML ensures timely identification and delivery of support requirements for acquisition programs.

b. Integrated Logistics Support Plan (ILSP). A document that describes the integrated logistics support program requirements, tasks, and milestones for an acquisition program. The ILSP is developed under direction of the APML with input from the NAILSMT. The ILSP is an iterative document and is updated for each key decision point.

c. Lead or Designated FAA Region. The airway facilities division in the region designated to receive and implement the first subsystem/equipment delivered by the acquisition program or as otherwise designated by the program management office in coordination with the System Management Service (ASM). A lead region representative is identified prior to the first NAILSMT meeting.

d. Acquisition Program. A directed, funded effort that is designed to provide a new or improved capability in response to a validated need. Acquisition programs are defined in Order 1810.1F, Acquisition Policy.

e. National Airspace Integrated Logistics Support (NAILS). A disciplined approach to plan and integrate support considerations into design, acquire the necessary initial support for the subsystem/equipment, and identify life-cycle support requirements.

f. National Airspace Integrated Logistics Support Management Team (NAILSMT). A team formed for each acquisition which identifies requirements and plans and coordinates and integrates a logistics structure which will ensure systems are supportable prior to deployment. The team includes a representative for each logistics element.

g. National Airspace System (NAS). The facilities, equipment, regulations, procedures, and personnel that support the safe and efficient movement of all aircraft in U.S. airspace.

h. Program Manager (PM). The official responsible for managing an acquisition program.

6. AUTHORITY TO CHANGE THIS ORDER. This order is controlled by the Acquisition System Configuration Control Board and changes to it are made in accordance with Order 1810.7, Management of Acquisition Policy.

7. POLICY. All NAS acquisition programs will include supportability as a principal consideration. NAILS activities will begin with Phase 1 of the acquisition process and continue until the system transitions to operational support under the System Management Service and the Mike Monroney Aeronautical Center. Support resources required to operate and maintain the NAS will be acquired in an effective and economical manner and these resource requirements will be addressed in Phase 1 of the acquisition process. Logistics funding requirements, both Facilities and Equipment (F&E) and Operational (OPS), will be identified through the NAILS process.

a. NAILS requirements will be identified, verified, acquired, and deployed as an integral part of the NAS acquisition process.

b. All NAS acquisition programs will be managed to achieve the best balance between cost, schedule, performance, and supportability.

c. Support considerations will be integrated with hardware and software design to achieve high system availability at the lowest life-cycle cost.

8. SCOPE. This order applies to all FAA organizations responsible for planning, integrating, and performing the logistics support for NAS acquisition programs.

## 9. NAILS MATRIX ORGANIZATION

a. NAILS, for each NAS acquisition program, shall be organized as a matrix team using the organizations identified herein. Multiple organizations shall focus their efforts to support the program manager for individual acquisition programs. NAILS matrix organizations include: Mike Monroney Aeronautical Center (AMC), FAA Technical Center (ACT), Office of Training and Higher Education (AHT), Associate Administrator for Contracting and Quality Assurance (ASU), System Management Service (ASM), Operational Support Service (AOS), NAS Transition and Implementation Service (ANS), Air Traffic Plans and Requirements Service (ATR), Office of Air Traffic Program Management (ATZ), Planning Branch in the Office of the Associate Administrator for Airway Facilities (AAF-11), and lead or designated regional airway facilities division.

b. ANS is responsible for ensuring that NAILS requirements are identified and integrated into acquisition programs to facilitate total life-cycle support. The NAILS Program Division (ANS-400) is the focal point for NAILS and coordinates interaction among the matrix organizations.

c. The APML is the principal focus for support on a program for the matrix organizations. The matrix organizations will:

- (1) Support the NAILS process by participating in NAILSMT meetings.
- (2) Support the NAILS program requirements in their respective budgets or identify the requirements to the acquisition program manager, as appropriate.
- (3) Develop logistics requirements for the NAILS elements defined in paragraph 10a, to be included in the ILSP, procurement package, and other acquisition program documents.
- (4) Develop internal policies and procedures to implement the NAILS program.
- (5) Evaluate contractor-produced plans, data, and other deliverable products and provide input to the APML.
- (6) Participate in program and technical reviews, to include meetings convened by the APML.

10. NAILS ELEMENTS AND ELEMENT MANAGERS.

a. NAILS Elements. NAILS elements are the principal logistics requirements that must be properly integrated to achieve economical and effective support of a subsystem/equipment throughout its life cycle. The eight NAILS elements are:

(1) Direct-Work Maintenance Staffing. Direct person-hours required to perform maintenance actions to maintain a subsystem/equipment over its life cycle.

(2) Maintenance Planning. The process of determining and establishing maintenance requirements for the life of a supported subsystem/equipment. This includes support for hardware and software.

(3) Maintenance Support Facilities. Maintenance support work areas, storage areas, or other facilities required to perform maintenance tasks.

(4) Packaging, Handling, Storage, and Transportation. Resources and methods to ensure that subsystem/equipment and support items are preserved, packaged, handled, and transported safely.

(5) Supply Support. Actions taken to acquire, catalog, receive, store, and issue items of supply.

(6) Support Equipment. The tools and equipment required to support the operation and maintenance of a subsystem/equipment. This includes standard and special tools and equipment.

(7) Technical Data. Recorded information such as manuals, specifications, drawings, and operational test procedures required to operate and maintain a subsystem/equipment over its life cycle.

(8) Training, Training Support, and Personnel Skills. Identification of skills, processes, procedures, course material, and equipment used to train personnel to operate and maintain a subsystem/equipment.

b. NAILS Element Managers (NAILS EM). NAILS EM's are representatives empowered by an office, organization, or activity having responsibility for accomplishing actions to identify and meet NAILS requirements. NAILS EM's shall respond directly to the requirements of the APML. Organizations responsible for NAILS elements include: FAA Logistics Center (AML), FAA Academy (AMA), Airway Facilities Training Program Division (AHT-400), Air Traffic Training Program Division (AHT-500), Maintenance Engineering Division (ASM-100), Maintenance Operations Division (ASM-200), National Systems Requirements Analysis Division (AOS-100), Automation Software Policy and Planning Division (ATR-200), and the Training Requirements Program (ATZ-100). NAILS elements and responsible NAILS EM's are shown in Figure 1, NAILS Element and Element Managers.

#### 11. NAILS MANAGEMENT TEAM ORGANIZATION.

a. General. Each NAILS program shall be planned and executed by a NAILSMT. The NAILSMT shall be part of the acquisition program organization operating under the direction of the PM. The NAILSMT shall be established at phase 1 of the acquisition program.

b. NAILSMT Functions. The function of the NAILSMT is to coordinate and integrate the efforts of all organizations concerned with support. Specific duties of the NAILSMT include:

(1) Participate in overall acquisition strategy development and planning, including market surveillance and investigation activities.

(2) Review assumptions used in cost benefit analyses and balance program supportability cost against program requirements.

(3) Identify life-cycle logistics support requirements to include resources and F&E and OPS funding.

(4) Influence hardware and software design/equipment selection toward greater supportability and cost effectiveness.

(5) Integrate NAILS element requirements and planning actions into an effective NAILS program within the overall acquisition structure.

Figure 1. NAILS Elements and Element Managers

| <u>Element</u>  | <u>Element Manager</u> |
|---|------------------------|
| Direct-Work Maintenance Staffing                                  |                        |
| FAA Logistics Center  | AML-1                  |
| FAA Academy   | AMA-1                  |
| AF Field  | ASM-200                |
| AT Software   | ATR-200                |
| Maintenance Planning  |                        |
| FAA Logistics Center  | AML-1                  |
| AF Field  | ASM-200                |
| Second Level Engineering Support                                  | AOS-100                |
| Maintenance Support Facilities                                    |                        |
| FAA Logistics Center  | AML-1                  |
| Academy   | AMA-1                  |
| Site Contract Maintenance   | ASM-100                |
| Packaging, Handling, Storage, and<br>Transportation               | AML-1                  |
| Supply Support  | AML-1                  |
| Support Equipment   |                        |
| Standard Test Equipment   | ASM-100                |
| Automated Test Equipment, Special Tools,<br>and Test Program Sets | AML-1                  |
| Technical Data  |                        |
| FAA Logistics Center  | AML-100                |
| FAA Academy   | AMA-1                  |
| AF Field  | AOS-100                |
| AT Software   | ATR-200                |
| Training, Training Support,<br>and Personnel Skills               |                        |
| AF-Training   | ASM-200/AHT-400        |
| AT-Training   | ATZ-100/AHT-500        |
| Logistics Center Depot Level Training                             | AML-200/AHT-400        |
| Training Support  | AMA-1                  |

(6) Identify schedule and contract conflicts with respect to NAILS activities and initiate or recommend actions to resolve issues or concerns.

(7) Evaluate the contractor's performance with respect to NAILS functions.

(8) Develop supportability test requirements for incorporation into the master test plan.

(9) Make recommendations to the PM regarding NAILS program planning and execution.

(10) Participate in the development and execution of the project implementation plan and coordination of actions to field logistics support resources.

c. NAILSMT Membership. NAILSMT members are:

(1) Associate program managers for logistics.

(2) Program office and additional personnel, as required.

(3) NAILS element managers.

(4) Representatives of lead or designated FAA regional airway facilities divisions.

(5) Subsystem/equipment contractor representatives when required.

12. PROCEDURES. NAILS shall be implemented by sequentially accomplishing the actions set forth below. Scheduling of tasks shall be compatible with acquisition program milestones and follow-on logistics support requirements. These tasks shall be executed by the NAILS matrix organizations to implement the NAILS program.

a. At program inception, the PM shall notify ANS-400 of the proposed subsystem/equipment acquisition program and request that an APML be assigned. The request shall be made within 30 days of the assignment of a PM.



- b. ANS-400 shall assign an APML within 30 days of a request and notify the PM and NAILS matrix organizations. At this time, ANS-400 shall request that NAILS matrix organizations designate a NAILS EM in accordance with Figure 1 within 30 days. An agreement describing the APML roles and responsibilities will be developed between the APML and PM and documented in a program directive or program support agreement.
- c. Each matrix organization having functional responsibility for a NAILS element shall designate a NAILS EM to provide NAILS planning and support requirements to the APML.
- d. The APML shall organize, schedule, and chair all NAILSMT meetings.
- e. Hardware and software maintenance requirements that are consistent with the NAS maintenance concept shall be developed by the respective NAILS EM's as identified in Figure 1 for each acquisition program. These requirements are the basis for the maintenance plan and must be developed early in the acquisition program so they can be included in acquisition strategy development and preparation of solicitation. Hardware and software maintenance requirements describe the approach to be used in sustaining the subsystem/equipment at a defined level of readiness in support of the operational requirements.
- f. The APML shall assist the PM in developing budget estimates for the acquisition and support costs related to NAILS requirements.
- g. The APML shall develop the ILSP during phase 1 of the acquisition program based on the support requirements identified by the NAILSMT. The APML shall update the ILSP at each key decision point.
- h. The APML shall ensure that all NAILS element requirements are included in the procurement package. The APML shall monitor the procurement package and coordinate with the PM and contracting offices to define and resolve issues related to NAILS requirements.
- i. The APML and members of the NAILSMT shall monitor and evaluate the contractor's performance with regard to NAILS requirements.
- j. The APML and members of the NAILSMT shall ensure that contract data requirements list (CDRL) products, and other items of NAILS interest, are evaluated for completeness, accuracy, timeliness, and provide findings to the PM.

k. The APML and designated members of the NAILSMT shall participate in program and technical reviews.

l. The APML shall be the focal point for determining NAILS impact during analysis of engineering change proposals (ECP) and NAS change proposals (NCP) and shall ensure that appropriate responses are provided to the configuration control board. The APML shall ensure that revisions to the ILSP resulting from an approved ECP or NCP are properly implemented.

m. At the conclusion of the acquisition process, the APML shall turn the logistics support management process over to the operational support organizations, ASM, AOS, and AML.

13. RESPONSIBILITIES. AAF-1 has overall responsibility for developing, implementing, and ensuring compliance with NAILS policy. In support of this:

a. The Program Manager for Advanced Automation (AAP); the Program Directors for Automation (ANA); Communication (ANC); Navigation and Landing (ANN); Surveillance (ANR); Weather/FSS (ANW); Research and Development Service (ARD); Managers, Facilities Integration Division (ANS-200); and Special Programs Integration Division (ANS-300) shall:

(1) Notify ANS-400 of each new subsystem/equipment acquisition program, and request assignment of an APML.

(2) Request participation of matrix organizations in market surveillance and investigation.

(3) Budget and fund for each subsystem/equipment acquisition to include NAILS requirements.

(4) Include supportability requirements as defined in the ILSP in the procurement package.

(5) Include the APML in all acquisition program activities that affect supportability.

(6) Deliver supportable subsystem/equipment in accordance with the ILSP.

b. The Program Director for Communications, (ANC):

- (1) Conducts NAILS planning for aircraft acquisition programs.
- (2) Applies the principles of this order to aircraft acquisition programs.
- (3) Exercises overall management responsibility for the aircraft acquisition program.

c. The NAS Transition and Implementation Service (ANS):

- (1) Develops, monitors, and implements NAILS policy, standards, plans, directives, and guidelines.
- (2) Assigns an APML to support each PM, except for aircraft acquisition programs, to manage NAILS functions for the acquisition program.
- (3) Coordinates and integrates actions to identify NAILS requirements for each acquisition program, with assistance from NAILS matrix organizations.
- (4) Assists in the development of NAILS related procurement program documentation and budget estimates.
- (5) Develops, coordinates, and updates the ILSP using recommended input from the NAILS EM's. Ensures adherence to the ILSP throughout the acquisition program.
- (6) Participates in all acquisition program activities that affect supportability.
- (7) Reviews procurement documents and verifies inclusion of NAILS requirements.
- (8) Coordinates review of contractor deliverables to ensure that contract requirements are satisfied. Maintains liaison with the contractor's integrated logistics support manager through the contracting officer.

(9) Coordinates supportability test requirements for incorporation into program test plans.

(10) Reviews and analyzes ECP's and NCP's for factors affecting supportability and provides input to the review process.

(11) Represents the agency in all NAILS joint planning activities with Department of Defense and/or other government agencies.

d. The System Management Service (ASM):

(1) Designates NAILS EM's and develops requirements for NAILS elements in accordance with Figure 1. Provides requirements to the APML and matrix organizations for incorporation into NAILS program documents and acquisition program documents.

(2) Develops AF field maintenance and training requirements for acquisition programs. Provides requirements to the APML and other matrix organizations for incorporation into procurement documents and other NAILS program documents.

(3) Provides budget input, both F&E and OPS, for NAILS requirements in its functional area of responsibility.

(4) Reviews and evaluates NAILS contract deliverables pertaining to its functional area of responsibility.

(5) Participates in NAILSMT meetings, program reviews, and technical reviews, as required.

(6) Provides input to supportability test planning.

(7) Prepares training proposals to identify training requirements and training support requirements.

(8) Analyzes ECP's and NCP's for their impact on NAILS requirements and provide input to the review process.

(9) Manages and funds national maintenance contracts for NAS subsystem/equipment.

e. The Office of Higher Education and Training (AHT):

(1) Designates NAILS EM's and develops requirements for NAILS elements in accordance with Figure 1. Provides requirements to the APML and other matrix organizations for incorporation into NAILS program documents and acquisition program documents.

(2) Provides budget input, both F&E and OPS, and prepares training procurement documents to obtain training and training support for NAS acquisition programs.

(3) Ensures review and evaluation of contract deliverables pertaining to training.

(4) Participates in NAILSMT meetings, program reviews, and technical reviews.

(5) Provides input to supportability test planning.

(6) Analyzes ECP's and NCP's for their impact on training, training support, and personnel skills and provides input to the review process.

f. The Associate Administrator for Contracting and Quality Assurance (ASU):

(1) Provides copies of procurement documents including requests for proposals, invitations for bids, amendments, contracts, and contract modifications to the APML for review and verification that NAILS requirements are identified and clearly defined.

(2) Participates in NAILSMT meetings when required.

g. The Office of Air Traffic Program Management (ATZ):

(1) Designates a NAILS EM and develops requirements for NAILS elements in accordance with Figure 1. Provides requirements to the APML and other matrix organizations for incorporation into NAILS program documents and acquisition program documents.

(2) Prepares training proposals to identify training requirements and training support requirements.

(3) Analyzes ECP's and NCP's for their impact on AT training and documentation and provides input to the review process.

h. The Air Traffic Plans and Requirements Service (ATR):

(1) Designates a NAILS EM and develops requirements for NAILS elements in accordance with Figure 1. Provides requirements to the APML and other matrix organizations for incorporation into NAILS program documents and acquisition program documents.

(2) Participates in the development of system support requirements.

(3) Provides budget input for, both F&E and OPS, NAILS requirements in its functional area of responsibility.

(4) Participates in NAILSMT meetings, program reviews, and technical reviews.

(5) Reviews ILSP's and other NAILS documents to ensure that air traffic requirements are met.

(6) Reviews and evaluates results of operational and support software shakedown testing and makes recommendations on factors affecting supportability.

(7) Analyzes ECP's and NCP's for their impact on operations and life-cycle support and provides input to the review process.

i. The Mike Monroney Aeronautical Center (AMC):

(1) Designates a NAILS EM and develops requirements for NAILS elements in accordance with Figure 1, NAILS Elements and Element Managers. Provides requirements to the APML and other matrix organizations for incorporation into NAILS program documents and acquisition program documents.

(2) Develops depot-level maintenance and engineering support requirements for each acquisition. Provides requirements to ASM for incorporation into the subsystem/equipment maintenance requirements document.

(3) Provides budget input, both F&E and OPS, for NAILS requirements in the AMC functional areas of responsibility.

(4) Reviews and evaluates contract deliverables.

(5) Participates in NAILSMT meetings, program reviews, and technical reviews.

(6) Provides input to supportability test planning.

(7) Analyzes ECP's and NCP's for their impact on life-cycle support and provides input to the review process.

(8) Provides depot-level maintenance support for NAS subsystem/equipment as designated by the ILSP and maintenance plan.

(9) Provides training and training support for NAS subsystem/equipment.

j. The Operational Support Service (AOS):

(1) Designates a NAILS EM and develops requirements for NAILS elements in accordance with Figure 1, NAILS Elements and Element Managers. Provides requirements to the APML and other matrix organizations for incorporation into NAILS program documents and acquisition program documents.

(2) Provides budget input, both F&E and OPS, for NAILS requirements in its functional area of responsibility.

(3) Reviews and evaluates NAILS contract deliverables pertaining to its functional area of responsibility.

(4) Participates in NAILSMT meetings, program reviews, and technical reviews, as required.

(5) Advises and assists the APML in identifying supportability requirements that are to be evaluated during shakedown.

(6) Develops plans and procedures for the conduct of shakedown testing.

(7) Conducts shakedown testing and provides supportability feedback to the APML.

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(8) Provides second level engineering support on equipment and facilities in the NAS.

k. The FAA Technical Center (ACT):

(1) Advises and assists NAILSMT in identifying NAILS supportability requirements that are to be evaluated during shakedown testing.

(2) Incorporates supportability test procedures into master test plans.

(3) Participates in NAILSMT meetings, program reviews, and technical reviews.

(4) Identifies support requirements including training, associated with test and evaluation.

(5) Conducts integration testing and provides supportability feedback to the APML and PM.

(6) Analyzes ECP's and NCP's for their impact on ACT functions and provides input to the review process.

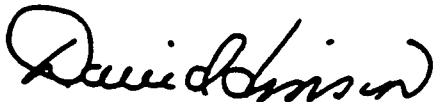
l. The Regional Airway Facilities Divisions:

(1) Designate a representative to serve as point of contact for NAILS.

(2) Participate in NAILSMT meetings for national acquisition programs when designated as lead region. Coordinate with other regions and represent the field in assessing the completeness and accuracy of planned logistics support when designated as lead region.

(3) Analyze ECP's and NCP's for their impact on operations and life-cycle support and provide input to the review process.

(4) Apply the principles of this order to any regional acquisition program for NAS subsystem/equipment requiring NAILS planning and execution.



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